

IN THE UNITED STATES PATENT AND TRADEMARK OFFICEIn re the Application of: **Hiroaki MIZUSHIMA et al.**Art Unit: **2872**Application Number: **10/573,646**Examiner: **Derek S. Chapel**Filed: **November 21, 2006**Confirmation Number: **8966****For: METHOD FOR PRODUCING POLARIZING FILM, POLARIZING FILM, AND
IMAGE DISPLAY USING THE POLARIZING FILM**Attorney Docket Number: **062338**Customer Number: **38834****DECLARATION UNDER 37 C.F.R. §1.132****Mail Stop: Amendment**
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

I, Hiroaki Mizushima, declare and state the following:

I majored in Chemical engineering at Hiroshima University from 1995 to 2001.

I received a Masters degree in 2001.

Since April 2001, I have been employed by Nitto Denko Co. of Onomichi , Hiroshima, Japan where my present title is Chief engineer. During my employment therein, I have conducted development of polarizer for LCD.

I am an inventor named in the above-identified patent application.

I am familiar with the prosecution of the above-identified patent application.

The following experimentations were conducted under my supervision and/or control.

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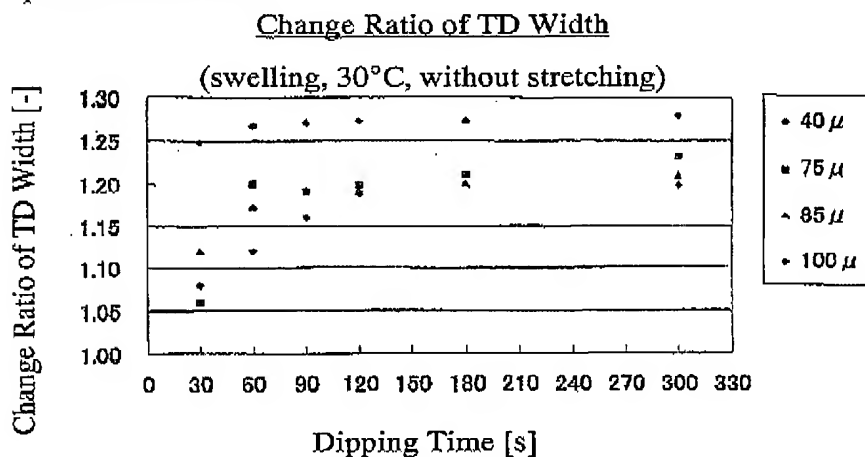
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Width Change Ratio (with pure water at 30°C)

Change ratio of TD width for each thickness of PVA.

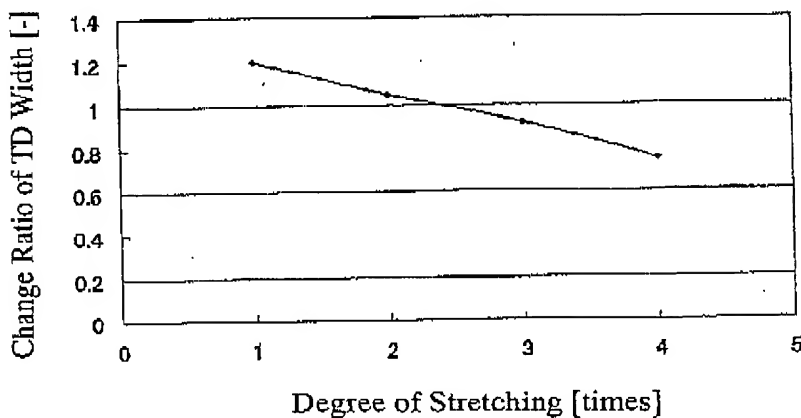
Change ratio is about 1.2 times without stretching because PVA of 75 μm is swelled for 120 sec. in production process.

The width of PVA is measured by a ruler after dipping for a predetermined time.



Width Change Ratio

Stretching results in reduction of width.



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From the above experimental results, I have concluded, among other things, that the experimental results show that the film width changes due to the swelling and the stretching. The first chart is directed to the swelling of "VF-PS #7500" film (manufactured by KURARAY CO., LTD.; 100mm by 100mm in size; 75 μ m in thickness) when dipping into pure water at 30°C and the second chart is directed to the width shrinkage of the film due to stretching in pure water at 30°C for 120 sec. According to the first chart, it was found that the film width increases as time advances during the swelling process of PVA film. According to the second chart, it was found that the film width decreases as degree of the stretching increases.

Therefore, the width of the film is affected by a dipping step and the width of the film is affected by a stretching step.

The undersigned declares that all statements made herein of his own knowledge are true, and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under §1001 of Title 18 of the United States Code and that willful false statements may jeopardize the validity of the application or any patent issued thereon.

Hiroaki Mizushima
Hiroaki Mizushima

Signed this 14th day of January, 2010.